ARC Commodity Factor Risk Model
Monthly Report June 2020

The Asset Risk Company (ARC) Commodity model is a cross-sectional commodity factor model. Factors including commodity sectors, sub-sectors, and styles are estimated daily. It provides a framework for managing risk and investment decisions. The model is presented in a nesting format allowing the decision maker to view the market from a macro lens of broad classes (metals, energy, agricultural) to finer product classifications, while preserving the attribution of risk between the style and non-style factors.

YTD, MTD & Historical Styles Performance Report:

| Factor	MTD Perf	YTD Perf	Historical Returns*	Volatility*	Sharpe Ratio*
Basis	-1.5%	-3.3%	-3.1%	2.5%	(1.25)
Momentum	-0.7%	-2.3%	1.5%	3.8%	0.40
ST Momentum	-0.8%	-2.8%	-2.9%	3.3%	(0.90)
Open Interest	0.6%	-8.8%	-3.4%	3.8%	(0.90)
Trading Activity	-0.3%	0.6%	0.1%	1.5%	0.07
Volatility	0.5%	-0.3%	0.2%	4.8%	0.04
ST Volatility	-0.9%	-0.2%	-1.7%	3.3%	(0.50)

* Annualized 2017-2020

Open Interest is back to its historical trends. Momentum is still negative. Managers could benefit from portfolios tilted towards these factors. We illustrate with factor based portfolios, Low Vol, Value & Momentum.

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YTD, MTD Factor Based Portfolios Performance Report:

Returns	ARC Low Vol	ARC Value	ARC Momentum	IPath BB ETN
Jun-20	0.9%	2.1%	-0.4%	2.9%
YTD	-12.7%	-19.1%	-15.3%	-23.0%

Cumulative Returns
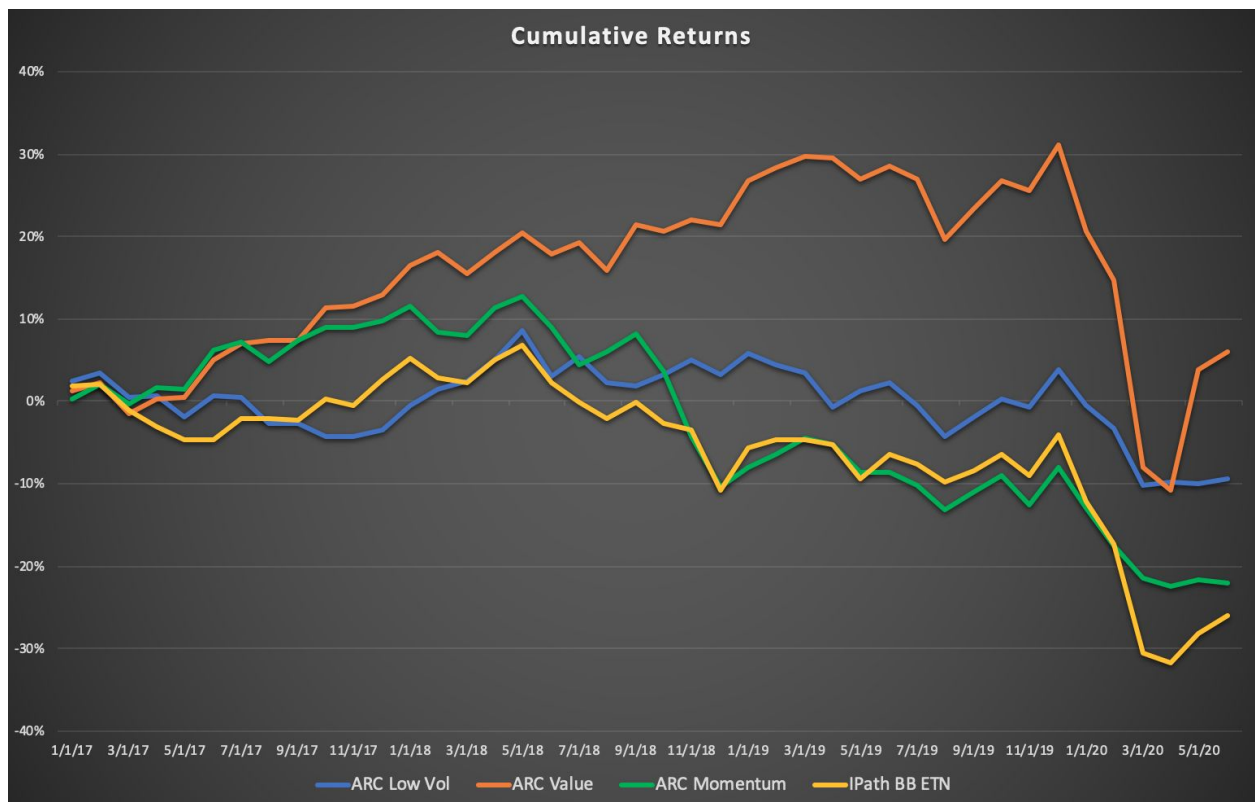
Sectors, Subsectors MTD, YTD & Historical Report

Sectors are still underwater YTD but big rally from Base Metals and YTD precious metals are up 16.5%. Note that sectors and sub-sectors returns are jointly estimated using ARC's proprietary nesting model approach. They cover the full term structure.

Factor	MTD Perf	YTD Perf	Historical Returns*	Volatility*	Sharpe Ratio*
Agriculture	**-0.1%**	**-8.1%**	**-4.9%**	**8.0%**	**-0.6**
Grain And Oilseed	-0.8%	-8.8%	-5.1%	9.4%	-0.5
Lumber And Pulp	12.5%	6.0%	14.3%	29.3%	0.5
Proteins	-0.4%	-10.5%	-3.2%	9.9%	-0.3
Softs	0.9%	-1.2%	-6.6%	9.5%	-0.7
Energy	**0.4%**	**-15.6%**	**-8.0%**	**13.3%**	**-0.6**
Biofuels	5.0%	-16.8%	-7.8%	19.3%	-0.4
Coal	9.7%	-6.5%	1.2%	15.7%	0.1
Crude Oil	-2.4%	-19.7%	-5.5%	15.3%	-0.4
Natural Gas	1.6%	-5.4%	-8.4%	7.4%	-1.1
Petrochemicals	-1.4%	-10.3%	-12.0%	20.7%	-0.6
Refined Products	2.3%	-30.1%	-11.3%	22.0%	-0.5
Metals	**5.8%**	**-2.1%**	**6.4%**	**14.6%**	**0.4**
Base	8.0%	-9.3%	3.9%	16.4%	0.2
Precious	1.7%	16.5%	10.5%	16.4%	0.6

* 2017-2020

Factors Correlations:

As market volatility decreases, short term correlations have come down. Long term correlations between Styles Factors are low.

Correlations	Agriculture	Energy	Metals	Basis	Momentum	ST Momentum	Open Interest	Trading Activity	Volatility	ST Volatility
Agriculture	1.00	0.62	0.58	(0.45)	0.38	(0.07)	(0.34)	(0.07)	0.27	0.33
Energy	0.43	1.00	0.62	(0.58)	0.70	(0.14)	(0.37)	0.02	0.29	0.29
Metals	0.31	0.21	1.00	(0.53)	0.34	(0.08)	(0.37)	(0.11)	0.17	0.35
Basis	(0.34)	(0.66)	(0.40)	1.00	(0.43)	0.09	0.35	0.07	(0.16)	(0.25)
Momentum	0.24	0.62	0.09	(0.60)	1.00	(0.18)	(0.29)	0.21	0.26	0.11
ST Momentum	(0.26)	(0.05)	(0.20)	0.36	(0.16)	1.00	0.17	(0.02)	(0.05)	0.19
Open Interest	0.22	0.67	0.24	(0.47)	0.36	0.06	1.00	0.46	(0.09)	(0.09)
Trading Activity	0.39	0.74	0.19	(0.51)	0.57	0.11	0.76	1.00	0.27	(0.11)
Volatility	0.23	0.10	(0.33)	0.17	(0.05)	0.40	(0.14)	0.28	1.00	(0.44)
ST Volatility	0.24	0.12	0.56	(0.30)	0.08	(0.22)	0.03	0.01	(0.57)	1.00

1 yr correlations on the right (above the diagonal), 30 days on left (below the diagonal).

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